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AUTHOR	Rehberg, Richard A.; Schafer, Walter E.
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ABSTRACT

Data from 785 male seniors from 6 urban Pennsylvania high schools are used to evaluate the relationship between post high school educational expectations and participation or non-participation in interscholastic athletic activities. A zero-order gamma of .28 indicates that educational expectations and athletic participation are positively associated. The possibility that this association is spurious is tested by statistically controlling 3 potentially confounding variables: social status, academic performance, and parental educational encouragement. A 3rd-order net partial association of .22 suggests that the association is not spurious, that the positive relationship between educational expectations and athletic participation is a result of the socialization experience of interscholastic athletics rather than of differential selection into high school sports. Further analyses indicate, however, that the positive association is not constant over the relevant control variables but that it is an interactive relationship; specifically, that the positive association is strongest for those categories of respondents "least" positive disposed toward a college education and weakest for those categories of respondents "most" positively disposed toward a college education. (Author)

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ADOLESCENT EDUCATIONAL EXPECTATIONS AND HIGH SCHOOL INTERSCHOLASTIC ATHLETICS

by

Richard A. Rehberg
State University of New York
at Binghamton

Walter E. Schafer
The University of Oregon

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INTRODUCTION

James Coleman has remarked that a stranger in an American high school might well suppose, by looking and listening, that:

> . . . more attention is paid to athletics by teenagers, both as athletes and as spectators, than to scholastic matters. [1]

Certainly, the vast amounts of spectator and participant time and energy devoted to athletic teams, their contests (often played on expansive as well as expensive facilities), and their supporting pep rallies, marching bands, and cheerleaders attest to the importance of high school sports, both to the students themselves and to their communities as well.

Given the importance and prestige of sports in American secondary schools, the question can be raised as to what effect, if any, interscholastic athletics has on the educational objectives of the high school. One of these objectives is the preparation of adolescents for college. The question examined in this paper is whether participation in interscholastic athletics exerts a positive or a negative influence on the post-high school educational expectations of adolescents.

Since literature on the educational expectation - athletic participation relationship is virtually non-existent, we cannot approach the construction of hypotheses directly but must do circuitously, i.e., by noting the findings of those studies which have investigated the relationship between athletic participation and those variables which are linked with educational expectations.

One set of such studies are those concerned with athletic participation and academic performance, and academic performance and educational expectations. A positive association between athletic participation and academic performance has been reported by several investigators, including Eidsmore, Schafer and Armer, and, indirectly, by Coleman.[2] Eidsmore computed the mean grade points of participants and non-participants in varsity football teams from twenty-four of the top thirty Iowa high school teams for the year 1962. He reports that:

> The total grade-point average of the 592 players in all subjects carried was 2.523, whereas the grade-point average of their non-participating classmates was 2.085. This constitutes a very significant departure in favor of the football players.[3]

Without controls for relevant antecedent variables, it is possible that the grade-point difference reported by Eidsmore is spurious. Evidence that such a difference is not spurious comes from Schafer and Armer's study of 585 sophomore boys from two mid-western high schools. In that study, controls were invoked for five relevant variables: year in school, measured intelligence, father's occupation, previous grade-point average, and curriculum. While these controls reduced an initial zero-order difference of .52 points (athletes = 2.35, non-athletes 1.83) to a fifth-order difference of .11 points (athletes = 2.35, non-athletes 2.24), the direction of the data still showed a positive association between academic performance and athletic participation.[4] Finally, while the tone of Coleman's Adolescent Society seems to suggest that athletic participation is detrimental to the academic interests and performance of students, the data of that study suggest otherwise. An inspection of the appropriate tables reveals that in seven of the ten midwestern schools surveyed, athletes, at least "top athlets," had higher mean grade points than the student body as a whole.[5]

The positive association between academic performance and educational expectations has been reported in several studies. Berdie, for example, reports correlations between these two variables averaging about .36, and our data also show a positive association between the two variables. [6]

A second set of relevant studies are those concerned with athletic participation and peer group membership, and with peer group membership and educational expectations. In his Adolescent Society, Coleman is quite explicit in relating athletic participation to membership in the most prestigeful of peer groups, the 'leading crowd.' He writes:

> The relationship is striking. Going out for football is related to being a member of the various elites more than any other variable in this study. None of the background variables examined earlier, combined in whatever way, relate so strongly and consistently with membership in the elites. [7]

As to the social composition of such elites, Coleman reports that:

> . . . there is a tendency toward control by the higher-educated, more middle-class students in the school, [although] this tendency is sharply diminished when such students become a small minority in the system. [8]

Concerning the educational expectations of these elites, Coleman states that:

> The elites more often intend to go to college than do the students as a whole. * * * The background difference is not sufficient to account for their higher college-going intentions. Evidently, something over and above background differences lead elites to be more college bound. [9]

Both the socioeconomic status and the educational expectations of peer groups have been found to be positively correlated with the educational expectations of the adolescent. Thus, Campbell and Alexander, Krauss, and Rehberg all report that as the proportion of college-bound friends increases, so does the proportion of students themselves reporting college expectations.[10]

Given these two sets of findings relating educational expectations to athletic participation, via academic performance and membership in college-oriented leading crowds, we suggest that:

> The proportion of athletes expressing college expectations is greater than the proportion of non-athletes expressing college expectations.

While our data are adequate for a test of this proposition, they are not adequate for an empirical interpretation of that relationship. For example, we are unable at this time [11] to replicate Coleman's finding regarding the characteristics of the "leading crowds," athletic participation as an almost sufficient condition for membership in those cliques, and the effect of such membership on the educational expectations of the athlete.

Returning to Schafer and Armer's study of academic performance and athletic participation, it is important to note that their analysis suggests that the positive effect of participation upon academic performance is not constant among relevant categories of adolescents. Specifically, they found that athletic participation made a greater positive contribution to the grade-point average of those athletes "less-disposed" toward high academic achievement, (i.e., those who have blue-collar backgrounds, low IQ's, and who are not college-bound) than it did to the GPA's of those athletes "more-disposed" towards high academic achievement, (i.e., those who have white-collar backgrounds, high IQ's, and who are college-bound). [12]

What Schafer and Armer found, then, is essentially that after such relevant antecedent variables as social status and intelligence were controlled, a residual difference in academic achievement between athletes and non-athletes persisted and that these differences were greater among those respondents "less-disposed" than among those "more-disposed" toward high academic achievement. That Schafer and Armer were unable to "explain away" all of the achievement difference between athletes and non-athletes implies that some of the residual difference may be a product not of "selection" but of "socialization," i.e., of the experiential consequences of being an athlete or non-athlete. We speculate, in part, that this differential socialization effect can be attributed to the high probability that the "less-disposed" adolescent who is an athlete is likely to find that his physical competence makes accessible to him career relevant opportunities not accessible to his non-athletic counterpart. For example, on the basis of Coleman's study, we would suggest that the "less-disposed" athlete will be extended the opportunity of membership in the socially elite, college-bound leading crowd (and thereby be subjected to its achievement influence) while the "less-disposed" non-athlete will be denied such an opportunity. Also, because of his increased "visability" in the school system, we suggest that the "less-disposed" athlete is much more likely than his "invisable" non-athletic counterpart to find that teachers, guidance counselors, and others take more of an interest in his post high school career plans. Such opportunities as membership in the leading crowd, adequate career guidance, and the like, are normally available to adolescents who are "more-disposed" toward college, i.e., those from middle-status families, with parents who are interested in their educational careers, etc. Thus, athletic participation, while of some

benefit to the "more-disposed," would not be expected to be as beneficial to their career orientations as it would to the orientations of the "less-disposed." Therefore, we suggest that:

> The strength of the positive relationship between educational expectations and athletic participation is greater among adolescents "less-disposed" toward a college education than among those adolescents "more-disposed" toward a college education.

DESIGN AND DATA

The data for the study are based on questionnaire responses of 785 senior males from three public and three parochial schools in three middle-size (population 50 to 100 thousand) Pennsylvania cities. The survey was conducted in the Spring of 1965.

Information for the independent variable, participation or non-participation in interscholastic sports, was secured with an item which requested each respondent to list all of his extra-curricular activities during his senior year. The dependent variable, educational expectations, was measured with a fixed-response item which requested each respondent to indicate how far he actually EXPECTED TO go in school. [13] The relevant categories for this variable are: (1) four or more years of college, (2) two years of college, and (3) high school graduation or less.

The first step in the analysis is the measurement of the zero-order relationship between educational expectations and athletic participation. The finding of a positive association between these two variables, however, would not rule out the possibility that the relationship is spuriously produced by one or more variables with which both the dependent and the independent variables are associated. Consequently, the second step in the analysis requires a control for potentially confounding variables.

Data were collected for three such variables, all of which have been shown by previous research to be correlated with educational expectations, two of which have been shown to be correlated with athletic participation. The first of these, social status, has been measured with the Hollingshead Two Factor Index of Social Position.[14] A positive association between this variable and educational expectations has been reported consistently in a large number of studies.[15] The findings on the relationship of status with athletic participation are not so consistent, however. Hollingshead implies no association when he writes in Elmtown's Youth that: "Athletics attracts boys from all classes in about the same proportion." Schafer and Armer, however, report a positive association between the two, with 33 percent of white-collar boys participating compared with 22 percent of blue-collar boys.[16] Temporally, we assume that this control-variable precedes the independent variable in any kind of causal sequence. The second potentially confounding variable is academic performance, measured with class rank. Again, a positive association between educational expectations and academic performance has been reported in a number of studies.[17] And, as noted previously in this paper, several studies have found athletic participation to be positively associated with academic performance.[18] The temporal position of this control variable is difficult to specify. Inasmuch as Schafer and Armer's study revealed a fifth-order residual effect between performance and participation, there is evidence to suggest that performance is a temporal consequent of participation. Inasmuch as their five controls, one of which was previous academic performance, reduced a zero-order grade-point average difference of .52 points to a fourth-order difference of .11 points, the evidence also suggests that this variable may precede the independent variable. Perhaps the relationship between performance and participation approximates what Zetterberg has termed an "interdependent" relation-

ship, i.e., good grades facilitate an adolescent's participation in athletics, or perhaps he first makes good grades so that he will be permitted to participate, and, once he has become a participant, that experience itself further enhances his academic performance. [19] The third control variable is parental educational encouragement, measured by having the respondent indicate how frequently each parent encourages him to continue his education beyond high school. [20] Kahl, Bordua, Cohen, and Rehberg have reported moderately strong correlations between educational expectations and parental encouragement. [21] The present authors, however, are unaware of any studies which have investigated the relationship of participation to encouragement. With respect to its temporal location, we suggest that encouragement precedes athletic participation, although we are aware that an argument can be made for the reverse sequence or even for an interdependent relationship. [22] Because of the restricted sample size of 785, each of these three "test factors" has been dichotomized into "high" and "low" levels. [23]

The interaction analysis involves a comparison of the degree of association between the dependent and independent variables for two categories of adolescents: (1) those who are "more-disposed" toward a college education, and (2) those who are "less-disposed" toward a college education. Inasmuch as each of the three test-factors is an established correlate of adolescent educational expectations, each is used as a "dispositional" variable, with the "high" level indicating those adolescents who are more "disposed" toward college and the "low" level indicating those who are "less" disposed toward college. Interaction effects are evaluated by comparing appropriate coefficients of association. The greater the difference between two respective coefficients, the stronger the evidence for an interaction effect.

RESULTS

Educational Expectations and Athletic Participation: A True or Spurious Association?

Table 1 presents the data for the zero-order educational expectations and athletic participation relationship. Consistent with the first hypothesis, 82 percent of the athletes express an expectation to continue their

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Table 1 about here
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education beyond high school in a two or four year college, compared with 75 percent of the non-athletes. When a comparison is made using four years of college as the level of the dependent variable, the percentage difference is even larger, 62 percent of the athletes expressing such an expectation compared with 45 percent of the non-athletes. The strength of this association, measured with the Goodman-Kruskal gamma, is .28. [24]

As noted previously, however, a positive zero-order association between educational expectations and athletic participation cannot be taken as indicative of a true relationship between the two inasmuch as that relationship may be an artifact of other variables with which these two variables are commonly associated. Consequently, the dependent-independent variable relationship must be examined after the effects of such potentially confounding variables have been statistically controlled. If such controls fail to reduce markedly the magnitude of the association between expectations and participation, then the hypothesis of a true relationship between the two is made more tenable.

Social status is the first variable to be controlled. In Table 2 is displayed the anticipated positive association between the dependent variable

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Tables 2, 3, and 4 about here
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and status, the strength of which is indicated by a gamma of .50. Table 3

contains data suggesting that for this sample the relationship between athletic participation and status is more like that reported by Hollingshead, i.e., no association, than that reported by Schafer and Armer, i.e., a positive association. Thus, it is not surprising that a control for status, via tabular analysis and the Rosenberg test-factor standardization technique,[25] fails to reduce the magnitude of the association between expectations and participation, i.e., both the zero and the first-order gammas are .28.

Academic performance is the second control variable. As anticipated, Table 5 shows a high degree of association between the dependent and the

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Tables 5, 6, and 7 about here
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control variables, i.e., gamma of .73. Somewhat surprisingly, however, in view of the findings cited previously, the data in Table 6 suggest that there is virtually no relationship between academic performance and athletic participation. In fact, what little association exists is negative. We conjecture that a partial reconcilliation of this inconsistency, particularly between Schafer and Armer's study and this one, lies in the use of two-different grade levels for samples. Schafer and Armer found a positive relationship between academic performance and athletic participation, using sophomores as subjects. Rehberg and Schafer found no such relationship, using seniors as subjects. No doubt Schafer and Armer's sample contained potential drop-outs and drop-outs tend to have low grade points and not to participate in interscholastic athletics.[26] Part of their reported positive association, then, could be attributable to the inclusion of potential drop-outs in the non-participant component of their sample. Rehberg and Schafer's use of late-term seniors automatically excludes potential drop-outs, thereby

removing a possible source of grade point difference between athletes and non-athletes. Given this most minimal negative association between performance and participation, the partialling out of this control variable increases only slightly the magnitude of the relationship between expectations and participation, i.e., first-order gamma of .29 as in Table 7.

Parental educational encouragement is the third and final control variable. That the dependent variable is associated with this control variable is evident from an inspection of Table 8, i.e., gamma of .58 for

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Tables 8, 9, and 10 about here
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the expectation - encouragement relationship. Table 9 shows, interestingly, that encouragement and participation are positively associated, i.e., gamma of .28. Forty-one percent of those reporting high encouragement participate in athletics compared with 28 percent of those reporting low encouragement. One possible interpretation of this association is that parental encouragement represents not a specific form of educational pressure as such but rather a diffuse form of what Rosen has called "achievement training practices." Consistent with this more "liberal" interpretation is the finding that parental <u>educational</u> encouragement correlates positively not only with the adolescent's educational goals, but with his <u>occupational</u> goals as well.[27] As expected, the control for parental encouragement reduces the magnitude of the relationship between educational expectations and athletic participation from a zero-order gamma of .28 to a first-order gamma of .22 (see Table 10)

Parental educational encouragement then, is the only one of the three control variables that is more than minimally associated with both the independent and dependent variables. Therefore, it is not surprising that

the strength of the original relationship is only slightly reduced by a third-order analysis. The minimal difference between the third-order gamma of .24 and the zero-order gamma of .28, as exhibited in Table 11, thus renders tenable the proposition that there is a positive association between educational expectations and athletic participation which can neither be "explained away" nor "interpreted" by differences in social status, parental encouragement, or academic performance between athletes and non-athletes. This finding suggests, then, though it by no means conclusively proves, that athletic participation exerts an independent positive influence on the educational expectations of high school adolescents.

The Expectation - Participation Relationship: Invariant or Interactive?

It was suggested previously that the effect of athletic participation on educational expectations may be stronger for those adolescents who are "less-disposed" to college and weaker for those who are "more-disposed" toward college. Table 12 indicates that the magnitude of the relationship

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Table 12 about here
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is indeed stronger in the "low" or 'less" disposed levels of each of the three control variables. This is illustrated by the following gamma coefficients from that table.

Expectation - Participation Gammas: High and Low Levels of the Three Control Variables

	Hi[a] = .27		Hi = .25		Hi = .26
SES[b]		PEE[c]		AP[d]	
	Lo = .38		Lo = .40		Lo = .51

[a] For consistency of nomenclature, we are designating as "Hi" the Middle status level.

[b, c, d] Abbreviations for SocioEconomic Status, Parental Educational Encouragement, and Academic Performance, respectively.

Judged by the differences between these first-order gammas, an interaction does appear to exist between expectations and participation. That this interaction persists at the third-order level is evident from an inspection of Table 13. As the appropriate gammas indicate, there is a

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Table 13 about here
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continuing tendency for the magnitude of the positive association between the dependent and the independent variables to be stronger in the "low" or "less" disposed levels of each of the control variables than in the "high" or "more" disposed levels. For example:

Selected Expectation - Participation Gammas: High and Low Levels of Three Control Variables. Third-order Partials

HiSES, HiPEE,	HiAP =	-.18
	LoAP =	.37
HiSES, LoPEE,	HiAP =	.00
	LoAP =	.88
LoSES, HiPEE,	HiAP =	.04
	LoAP =	.38
LoSES, LoPEE,	HiAP =	.44
	LoAP =	.64

Two additional aspects of these interactions merit comment. First, the positive association between educational expectations and athletic participation has vanished in the three conditions where at least two of the three dispostion variables are "high."

Part of this disappearance may be attributable to a "ceiling" effect. The percentage of adolescents expressing college expectations in these categories is already so high, i.e., 75 to 96 percent, that participation in sports may become irrelevant as a determinant of educational goals.

Second, the interaction effect appears to be cumulative. That is, the degree of positive association between expectations and participation is greater for adolescents "less-disposed" on three than on two, on two than on one, and on one than on none of the three disposition variables. This is illustrated by the following mean weighted gamma coefficients from Table 14.

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Table 14 about here
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Expectation - Participation Mean Weighted Gammas
by Number of Variables Less-disposed On

Less-disposed on:	
0 variables	= -.18
1 variable	= .15
2 variables	= .46
3 variables	= .64

In brief, then, the data appear to indicate that the incremental effect of athletic participation on educational expectations is greatest among those adolescents "least-disposed" toward college and weakest among those adolescents "most-disposed" toward college.

SUMMARY AND CONCLUSIONS

These data have shown that a greater proportion of athletes than non-athletes expressed an expectation to four or more years of college, even when the potentially confounding variables of socioeconomic status, parental educational encouragement, and academic performance are statistically controlled. This relationship is especially marked among adolescents not otherwise disposed toward higher education, i.e., those from the lower half

of their class academically and from working-class homes where the parents do not frequently encourage the adolescent to continue his education beyond high school.

While we have chosen to interpret this positive association between expectations and participation as a consequence of the socialization experience of participating or not participating in interscholastic athletics, there is, of course, the alternative interpretation that the relationship is a product of selection. For example, despite our controls it might be that those with high educational expectations are more likely than those with low expectations to participate in athletics. Moreover, it is possible that our sample is not representative of high school students in general. Nevertheless, we suggest, for this sample, that involvement in high school sports appears to independently enhance an adolescent's chances of expecting to attend a four year college or university. To the extent that subsequent research can demonstrate that this is the case, interscholastic sports will have been shown to represent one channel for upward social mobility insofar as mobility is contingent upon a college education.

TABLE I

PERCENT OF RESPONDENTS REPORTING SPECIFIED EDUCATIONAL EXPECTATIONS BY ATHLETIC PARTICIPATION

(Zero-order Association)

Athletic Participation	Educational Expectations (In Years)				Total	N
	16 or more	14	12 or less	N.R.		
Yes	62	20	17	1	100	284
No	45	30	24	1	100	490
No Response	73	9	9	9	100	11
Totals	52	26	21	1	100	785

Gamma = .28

TABLE 2

PERCENT OF RESPONDENTS REPORTING SPECIFIED EDUCATIONAL EXPECTIONS BY HOLLINGSHEAD SOCIAL STATUS

(Zero-order Association)

Social Status	Educational Expectations (In Years)				Total	N
	16 or more	14	12 or less	N.R.		
Middle (I,II,III)	71	19	9	1	100	237
Working (IV,V)	43	29	27	1	100	548
Totals	52	26	21	1	100	785

Gamma = .50

TABLE 3

PERCENT OF RESPONDENTS REPORTING ATHLETIC PARTICIPATION, NON-PARTICIPATION, BY HOLLINGSHEAD SOCIAL STATUS

(Zero-order Association)

Social Status	Athletic Participation			Total	N
	Yes	No	N.R.		
Middle (I,II,III)	38	61	1	100	237
Working (IV,V)	36	63	1	100	548
Totals	36	62	1	99	785

Gamma = .04

TABLE 4

PERCENT OF RESPONDENTS REPORTING SPECIFIED EDUCATIONAL EXPECTATIONS BY ATHLETIC PARTICIPATION, WITH SOCIAL STATUS CONTROLLED

(First-order Association, Standardized Table)

Athletic Participation	Educational Expectations (In Years)				Total	N
	16 or more	14	12 or less	N.R.		
Yes	62	20	17	1	100	284
No	45	30	24	1	100	490
No Response	72	19	9	1	101	11
Totals	52	26	21	1	100	785

Gamma = .28

TABLE 5

PERCENT OF RESPONDENTS REPORTING SPECIFIED EDUCATIONAL EXPECTATIONS BY ACADEMIC PERFORMANCE

(Zero-order Association)

Academic Performance	Educational Expectations 16 or more	14	12 or less	N.R.	Total	N
High (Upper 50%)	81	10	9	1	101	326
Low (Lower 50%)	31	38	30	1	100	450
No Response	33	22	44	1	99	9
Totals	52	26	21	1	100	785

Gamma = .73

TABLE 6

PERCENT OF RESPONDENTS REPORTING ATHLETIC PARTICIPATION, NON-PARTICIPATION, BY ACADEMIC PERFORMANCE

(Zero-order Association)

Academic Performance	Athletic Participation			Totals	N
	Yes	No	N.R.		
High (Upper 50%)	35	63	2	100	326
Low (Lower 50%)	36	62	2	100	450
No Response	44	56	0	100	9
Totals	36	62	2	100	785

Gamma = -.02

TABLE 7

PERCENT OF RESPONDENTS REPORTING SPECIFIED EDUCATIONAL EXPECTATIONS BY ATHLETIC PARTICIPATION, WITH ACADEMIC PERFORMANCE CONTROLLED

(First-order Association,
Standardized Table)

Athletic Participation	Educational Expectations (In Years)				Total	N
	16 or more	14	12 or less	N.R.		
Yes	63	20	17	1	101	284
No	45	30	24	1	100	490
No Response	71	19	9	1	100	11
Totals	52	26	21	1	100	785

Gamma = .29

TABLE 8

PERCENT OF RESPONDENTS REPORTING SPECIFIED EDUCATIONAL EXPECTATIONS BY PARENTAL EDUCATIONAL ENCOURAGEMENT

(Zero-order Association)

Parental Encouragement	Educational Expectations (In Years) 16 or more	14	12 or less	N.R.	Total	N
Hi	62	27	11	1	101	513
Lo	31	25	44	1	101	236
No Response	36	28	28	8	100	36
Totals	52	26	21	1	100	785

Gamma = .58

TABLE 9

PERCENT OF RESPONDENTS REPORTING ATHLETIC PARTICIPATION, NON-PARTICIPATION, BY PARENTAL EDUCATIONAL ENCOURAGEMENT

(Zero-order Association)

Parental Encouragement	Athletic Participation			Total	N
	Yes	No	N.R.		
Hi	41	58	1	100	513
Lo	28	70	2	100	236
No Response	26	74	0	100	36
Totals	36	62	2	100	785

Gamma = .28

TABLE 10

PERCENT OF RESPONDENTS REPORTING SPECIFIED EDUCATIONAL EXPECTATIONS BY ATHLETIC PARTICIPATION, WITH PARENTAL EDUCATIONAL ENCOURAGEMENT CONTROLLED

(First-order Association, Standardized Table)

Athletic Participation	Educational Expectations				Total	N
	16 or more	14	12 or less	N.R.		
Yes	61	19	19	1	100	284
No	46	30	23	1	100	490
No Response	72	19	7	1	99	11
Totals	52	26	21	1	100	785

Gamma = .22

TABLE 11

PERCENT OF RESPONDENTS REPORTING SPECIFIED EDUCATIONAL EXPECTATIONS BY ATHLETIC PARTICIPATION, WITH SOCIAL STATUS, PARENTAL EDUCATIONAL ENCOURAGEMENT, AND ACADEMIC PERFORMANCE CONTROLLED

(Third-order Association, Standardized Table)

Athletic Participation	Educational Expectations (In Years) 16 or more	14	12 or less	N.R.	Total	N
Yes	61	19	18	1	99	284
No	46	30	23	1	100	490
No Response	70	20	9	1	100	11
Totals	52	26	21	1	100	785

Gamma = .24

TABLE 12

INTERACTION EFFECTS: EDUCATIONAL EXPECTATIONS AND ATHLETIC PARTICIPATION. FIRST-ORDER RELATIONSHIPS

Percent of Respondents Reporting Educational Expectations to Four or More Years of College

Disposition Variable		Athletic participation				
		Yes		No		Gamma*
Name	Level	%	N	%	N	
Social Status	High**	78	(190)	67	(144)	.27
	Low	55	(194)	36	(346)	.38
Parental Encouragement	High	68	(208)	56	(298)	.25
	Low	45	(66)	26	(164)	.40
Academic Performance	High	85	(116)	78	(205)	.26
	Low	46	(164)	21	(280)	.51

*Because of the attrition of cell n's in tabular partialling, these gamma values have been computed for a 2 x 2 table, i.e., Athletic Participation - Non-participation crossed with Four-year College Expectations - Non-four-year College Expectations. The "No responses" have been omitted from the computations.

**This level refers to the "Middle Status" category but for consistency of nomenclature, the designation "High" is employed.

TABLE 13

INTERACTION EFFECTS: EDUCATIONAL EXPECTATIONS AND ATHLETIC PARTICIPATION
THIRD-ORDER RELATIONSHIPS

Percent of Respondents Reporting Educational Expectations
to Four or More Years of College

Disposition Variables			Athletic Participation				Gamma*
			Yes		No		
Social Status	Parental Encouragement	Academic Performance	%	N	%	N	
High	High	High	95	(40)	96	(57)	-.18
		Low	68	(31)	49	(45)	.37
	Low	High	75	(8)	75	(16)	.00
		Low	67	(6)	11	(18)	.88
Low	High	High	85	(52)	84	(73)	.04
		Low	45	(82)	25	(121)	.44
	Low	High	69	(13)	50	(46)	.38
		Low	26	(38)	7	(82)	.64

*Computed with 2 x 2 cross-classification, i.e., Four years of College - Non-four years of College, Athletic Participation - Non-athletic participation, to enhance statistical reliability.

TABLE 14

CUMULATIVE INTERACTION EFFECT BETWEEN EDUCATIONAL EXPECTATIONS AND ATHLETIC PARTICIPATIONS. WEIGHTED MEAN GAMMA COEFFICIENTS FOR EACH OF FOUR COMBINATIONS OF DISPOSITION VARIABLES

Disposition Variables			Number Disposed On	Gamma	N	Mean Weighted Gamma
SES	PEE	AP				
Hi	Hi	Hi	3	-.18	(97)	-.18
Hi	Hi	Lo	2	.37	(76)	
Hi	Lo	Hi	2	.00	(24)	.15
Lo	Hi	Hi	2	.04	(125)	
Hi	Lo	Lo	1	.88	(24)	
Lo	Hi	Lo	1	.44	(203)	.46
Lo	Lo	Hi	1	.38	(59)	
Lo	Lo	Lo	0	.64	(120)	.64

REFERENCES

1. James S. Coleman, "Athletics in High Schools," Annals of the American Academy of Political and Social Sciences, 338, p. 33.

2. Russell M. Eidsmore, "High School Athletes are Brighter," School Activities, (November 1963), pp. 75-77; Walter E. Schafer and J. Michael Armer, "Athletic Participation and Academic Achievement Among High School Boys," a paper presented at the World Congress of Sport and Physical Education, Madrid, Spain, (September 1966); and James S. Coleman, The Adolescent Society, (Glencoe: The Free Press, 1961), especially pages 252, 274 and 275.

3. Eidsmore, op. cit., p. 76.

4. Schafer and Armer, op. cit.

5. Coleman, op. cit., pages 252, 274, and 275.

6. Ralph F. Berdie and Albert B. Hood, Trends in Post High School Plans Over an Eleven-Year Period. (Minneapolis: Student Counseling Bureau, University of Minnesota, 1963) (Cooperative Research Project No. 951), pp. 56-57.

7. Coleman, op. cit., p. 131.

8. Ibid., p. 109.

9. Ibid., p. 115.

10. C. Norman Alexander and Ernest Q. Campbell, "Peer Influences on Adolescent Educational Aspirations and Attainments," American Sociological Review. (August, 1964), pp. 568-575; Irving Krauss, "Sources of Educational Aspirations Among Working-Class Youth," American Sociological Review, (December 1964), pp. 867-879, and Richard A. Rehberg, Adolescent Career Plans and the Impact of Chronic Economic Distress Upon Adolescent Educational and Occupational Expectations and Aspirations, (University Park: The Pennsylvania State University, 1965), (Cooperative Research Project No. S-119).

11. The present authors currently are engaged in a large-scale research project involving a longitudinal panel study of 3500 high school students which, in part, is designed to facilitate the interpretation of the relationship between achievement and athletic participation.

12. Schafer and Armer, op. cit.

13. The item read: "CONSIDERING your abilities, grades, financial resources, etc., how far do you actually EXPECT TO go in school? Eight response categories were available, ranging from "12th grade but not necessarily graduate," to "Graduate or professional school."

14. August B. Hollingshead, The Two Factor Index of Social Position, New Haven: Yale, 1957, (mimeo).

15. The number of such studies is too long to list. For a rather comprehensive bibliography of these studies, see William Kuvlesky and George W. Ohlendorf, A Bibliography of Literature on Educational Orientations of Youth, (College Station: Texas A. and M. University, 1965).

16. August B. Hollingshead, Elmtown's Youth, (New York: John Wiley and Son, 1949), p. 194; Schafer and Armer, op. cit.

17. Berdie and Hood, op. cit. Our data reveal this same relationship.

18. Eidsmore, op. cit., Coleman, op. cit., Schafer and Armer, op. cit.

19. Hans Zetterberg, On Theory and Verification in Sociology (3rd ed. rev.) (Totowa: The Bedminster Press, 1965), pp. 72-74.

20. The question read: "Which ONE of the following statements is most true about continuing your education beyond high school?"

    1. My father [mother] never urges me to continue my education
    2. My father [mother] sometimes urges me to continue my education
    3. My father [mother] often urges me to continue my education
    4. My father [mother] constantly urges me to continue my education

    The question was asked separately for each parent. Ordinal scores of 1 - 4 were assigned to the response for each parent, 1 = never, . . . 4 = constantly, added, and from the total the integer of one subtracted, yielding a score range of 1 - 7. "Low" encouragement consists of scores 1,2,3,4. "High" of 5,6,7.

21. Joseph A. Kahl, "Educational and Occupational Aspirations of 'Common-Man' Boys," Harvard Educational Review, (Summer 1953), pp. 186-203; David T. Bordua, "Educational Aspirations and Parental Stress on College," Social Forces, (March 1960), pp. 262-269; Elizabeth G. Cohen, "Parental Factors in Educational Mobility," Sociology of Education, (Fall, 1965), pp. 404-425; Richard A. Rehberg and David L. Westby, "Parental Encouragement, Occupation, Education and Family Size: Artifactual or Independent Determinants of Adolescent Educational Expectations," Social Forces, (March 1967), pp. 362-374.

22. For example, for some adolescent it is plausible that the child is encouraged by his parents to continue his education only after he has demonstrated the ability and the interest, a demonstration perhaps initially motivated as a consequence of athletic participation.

23. For consistency of nomenclature, "middle-status" respondents are referred to as "high" status respondents.

24. Leo A. Goodman and William H. Kruskal, "Measures of Association for Cross Classifications," Journal of the American Statistical Association, (September, 1954) pp. 732-764.

25. Morris Rosenberg, "Test Factor Standardization as a Method of Interpretation," Social Forces, (October 1962), pp. 53-61.

26. For discussion relevant to "drop-outs" and participation in school activities, see: Kenneth Polk, "Adolescent, Committment, and Delinquency," (unpublished paper of the Lane County Youth Project, University of Oregon, Eugene, Oregon), and Robert J. Havighurst, et. al., Growing Up in River City, (New York: John Wiley and Sons, 1962).

27. Rehberg and Westby, op. cit.